

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A method of communications of traffic with different characteristics wherein traffic from at least two information sources is divided into two or more categories including a first and a second category for transfer with different characteristics, the method ~~characterized in that~~ comprising transmitting the traffic for the transfer with different characteristics ~~are transmitted~~ on physically wholly or partially separated channels.

2. (Currently Amended) The method according to claim 1 ~~characterized in that~~ wherein the different characteristics of transfer comprises different time scale of power control adjustments.

3. (Currently Amended) The method according to claim 2 ~~characterized in that~~ wherein there is a difference in time scale between at least two categories that is at least one order of magnitude.

4. (Currently Amended) The method according to ~~any of claims 1-3~~ claim 1, wherein the first category of communications is transmitted with stationary or quasi-stationary transmission power level.

5. (Currently Amended) The method according to claim 4 ~~characterized in that~~ wherein the quasi-stationary transmission power level is varying slower than the lowest speed of communications variations of the traffic of the first category.

6. (Currently Amended) The method according to ~~any of claims 1-3 characterized in that~~ claim 1, wherein the first category of communications is transmitted with channel adaptive data rate control.

7. (Currently Amended) The method according to ~~any of claims 1-3 characterized in that~~ claim 1, wherein at least one of the categories of communications comprises opportunistic communications.

8. (Currently Amended) The method according to ~~any of claims 1-3 characterized in that~~ claim 1, wherein the second category of communications is transmitted with power level adapted to counteract fading.

9. (Currently Amended) The method according to ~~any of claims 1-3 characterized in that~~ claim 1, wherein at least one of the categories of communications comprises conventional communications.

10. (Currently Amended) The method according to claim 9 ~~characterized in that~~ wherein the conventional communications comprise circuit switched communications.

11. (Currently Amended) The method according to claim 10 ~~characterized in that~~ wherein the circuit switched communications comprise voice communications.

12. (Currently Amended) The method according to claim 9 ~~characterized in that~~ wherein the conventional communications comprise communications with real-time requirements.

13. (Currently Amended) The method according to ~~any of claims 1-11 characterized in that~~ claim 1, wherein the communications are separated in one-dimensional domain.

14. (Currently Amended) The method according to claim 13 ~~characterized in that~~ wherein the one-dimensional domain is time domain.

15. (Currently Amended) The method according to claim 13 ~~characterized in that~~ wherein the one-dimensional domain is frequency domain.

16. (Currently Amended) The method according to claim 13 ~~characterized in that~~ wherein the one-dimensional domain is code domain.

17. (Currently Amended) The method according to ~~any of claims 1-11~~ claim 1, wherein the communications are separated in two-dimensional domain.

18. (Currently Amended) The method according to claim 17 ~~characterized in that~~ wherein the two-dimensional domain is time-frequency domain.

19. (Currently Amended) The method according to claim 17 ~~characterized in that~~ wherein the two-dimensional domain is time-code domain.

20. (Currently Amended) The method according to claim 17 ~~characterized in that~~ wherein the two-dimensional domain is frequency code domain.

21. (Currently Amended) The method according to ~~any of claim 1-11~~ claim 1, wherein the communications are separated in more than two-dimensional domain.

22. (Currently Amended) The method according to claim 21 ~~characterized in that~~ wherein the more than two-dimensional domain includes time, frequency or code domain.

23. (Currently Amended) The method according to ~~any of claims 1-22~~ characterized in that claim 1, wherein when applied to different cells of a cellular radio communications system, neighboring cells transmit on channels of separation minimizing interference between the neighboring cells and the differently characterized communications.

24. (Currently Amended) The method according to claim 23 ~~characterized in that~~ wherein the separation minimizes number of time slots, frequency slots or time-frequency slots of communications with different characteristics in the different cells.

25. (Currently Amended) The method according to claim 23 ~~characterized in that~~ wherein the separation maximizes signal to interference ratio or carrier to interference ratio of time slots, frequency slots or time-frequency slots, if any, of communications with different characteristics in the different cells.

26. (Currently Amended) A radio communications equipment of communications with different characteristics, the equipment ~~characterized by~~ comprising processing circuitry ~~allocating~~ adapted to allocate traffic transmissions of the differently characterized communications to physically wholly or partially separated channels.

27. (Currently Amended) The radio communications equipment according to claim 26 ~~characterized in that~~ wherein the different characteristics of transfer comprises different time scale of power control adjustments.

28. (Currently Amended) The radio communications equipment according to claim 27 ~~characterized in that~~ wherein there is a difference in time scale between at least two categories that is at least one order of magnitude.

29. (Currently Amended) The radio communications system according to ~~any of claims 26-28~~ characterized in that claim 26, wherein a first category of communications is transmitted with stationary or quasi-stationary transmission power level.

30. (Currently Amended) The radio communications system according to claim 29 ~~characterized in that~~ wherein the quasi-stationary transmission power level is varying slower than the lowest speed of communications variations of the traffic of the first category.

31. (Currently Amended) The radio communications equipment according to ~~any of claims 26-28 characterized by~~ claim 26, wherein the processing circuitry ~~comprising~~ further comprises channel adaptive data rate control means ~~controlling~~ adapted to control transmissions of the first category of communications.

32. (Currently Amended) The radio communications equipment according to claim 26 ~~characterized in that~~ wherein at least one of the communications is opportunistic communications.

33. (Currently Amended) The method according to ~~any of claims 26-28 characterized in that~~ claim 26, wherein a second category of communications is transmitted with power level adapted to counteract fading.

34. (Currently Amended) The radio communications equipment according to claim 32 ~~characterized in that~~ wherein at least one of the communications is conventional communications.

35. (Currently Amended) The radio communications equipment ~~according to~~ claim 34 ~~characterized in that~~ wherein the conventional communications comprise circuit switched communications.

36. (Currently Amended) The radio communications equipment according to claim 35 ~~characterized in that~~ wherein the circuit switched communications ~~comprise~~ further comprises voice communications.

37. (Currently Amended) The radio communications equipment according to claim 34 ~~characterized in that~~ wherein the conventional communications ~~comprise~~ further comprises communications with real-time requirements.

38. (Currently Amended) The radio communications equipment according to ~~any of claims 26-36 characterized in that~~ claim 26, wherein processing circuitry ~~separating is~~ adapted to separate communications in a one-dimensional domain.

39. (Currently Amended) The radio communications equipment according to claim 38 ~~characterized in that~~ wherein the one-dimensional domain is a time domain.

40. (Currently Amended) The radio communications equipment according to claim 38 ~~characterized in that~~ wherein the one-dimensional domain is a frequency domain.

41. (Currently Amended) The radio communications equipment according to claim 38 ~~characterized in that~~ wherein the one-dimensional domain is a code domain.

42. (Currently Amended) The radio communications equipment according to ~~any of claims 26-36 characterized by~~ claim 26, wherein the processing circuitry ~~separating is~~ adapted to separate communications in a two-dimensional domain.

43. (Currently Amended) The radio communications equipment according to claim 42 ~~characterized in that~~ wherein the two-dimensional domain is a time-frequency domain.

44. (Currently Amended) The radio communications equipment according to claim 42 ~~characterized in that~~ wherein the two-dimensional domain is a time-code domain.

45. (Currently Amended) The radio communications equipment according to claim 42 ~~characterized in that~~ wherein the two-dimensional domain is a frequency-code domain.

46. (Currently Amended) The radio communications equipment according to ~~any of claim 26-36 characterized by~~ claim 26, wherein the processing circuitry ~~separating is~~ adapted to separate communications in more than a two-dimensional domain.

47. (Currently Amended) The radio communications equipment according to claim 21 ~~characterized in that~~ 46, wherein the more than two-dimensional domain ~~includes~~ is selected from the group consisting of a time, frequency ~~or~~ and code domain.

48. (Currently Amended) A cellular radio communications system ~~comprising having~~ two or more cells ~~and; comprised of~~ radio communications equipment ~~according to any of claims 26-47, the system characterized by comprising:~~

processing circuitry ~~allocating~~ adapted to allocate traffic of different characteristics of different cells by which allocation interference between differently characterized communications of neighboring cells is minimized.

49. (Currently Amended) The radio communications system according to claim 48 ~~characterized by~~ wherein the processing circuitry ~~minimizing is adapted to minimize~~ the number of time slots, frequency slots or time-frequency slots of communications with different characteristics in the different cells.

50. (Currently Amended) The radio communications system according to claim 48 ~~characterized by~~ wherein the processing circuitry ~~maximizing is adapted to maximize~~ the signal to interference ratio or carrier to interference ratio of time slots, frequency slots or time-frequency slots, if any, of communications with different characteristics in the different cells.

51. (Canceled)